

## **AMENDMENTS TO THE CLAIMS**

*The listing of claims will replace all prior versions and listings of claims in the application:*

### **Listing of Claims:**

1. **(Currently Amended)** A method of creating a data path for a process executing on a server coupled to a storage area network (SAN), the SAN providing connectivity between the server and a storage device in the SAN, the method comprising:

parameterizing a set of attributes for a desired data path between the process and the storage device of the SAN, wherein the set of attributes includes:

a detail about at least one data volume;

a performance setting; and

a policy setting; and

constructing the data path that provides said set of attributes, wherein said constructing step further comprises:

searching the SAN for a set of candidate storage devices;

identifying a candidate data path from the server to each candidate storage device of said set of candidate storage devices;

evaluating each said candidate data path against the set of attributes to rank said candidate data paths from a best candidate data path to a least best candidate data path according to the attributes, wherein the act of evaluating each said candidate data path against the set of attributes includes ranking all of the switch fabrics in the SAN; and

selecting said best candidate data path as the data path to be constructed by said constructing step.

2. **(Original)** The method of claim 1 wherein said set of attributes includes a pre-defined template.

3. **(Previously Presented)** The method of claim 2 wherein said set of attributes includes a data path owner, application, and the server on which the application is executing.

4. **(Original)** The method of claim 2 wherein said pre-defined template specifies a set of performance, availability, and cost metrics for the desired data path.

5. **(Currently Amended)** ~~The method of claim 4~~ A method of creating a data path for a process executing on a server coupled to a storage area network (SAN), the SAN providing connectivity between the server and a storage device in the SAN, the method comprising:

parameterizing a set of attributes for a desired data path between the process and the storage device of the SAN, wherein the set of attributes includes:

a detail about at least one data volume;

a performance setting; and

a policy setting; and

constructing the data path that provides said set of attributes, wherein said constructing step further comprises:

searching the SAN for a set of candidate storage devices;

identifying a candidate data path from the server to each candidate storage device of said set of candidate storage devices;

evaluating each said candidate data path against the set of attributes to rank said candidate data paths from a best candidate data path to a least best candidate data path according to the attributes; and

selecting said best candidate data path as the data path to be constructed by said constructing step, wherein:

said pre-defined template specifies a set of performance, availability, and cost metrics for the desired data path,

said set of attributes includes a pre-defined template, and

said set of performance and availability metrics includes at least one of a number of threads, a security level, and a default volume size and characteristics, default path characteristics.

6. **(Original)** The method of claim 1 wherein said parameterizing step includes a step of entering a user-defined attribute for inclusion in said set of attributes.

7. **(Original)** The method of claim 6 wherein said entering step includes entry of said user-defined attribute by use of a graphical user interface coupled to the SAN.

8. - 17 **(Canceled)**

18. **(Original)** The method of claim 1 wherein said constructed data path includes all physical, logical and security component identification and configuration information sufficient to operably link the process to an identified data volume of the SAN.

19. - 49. **(Canceled)**

50. **(Previously Presented)** The method of claim 1, further comprising:  
connecting the SAN to a Wide Area Network (WAN) through a general purpose computer; and  
communicating with another processing system through the WAN using the general purpose computer.

51. **(Previously Presented)** The method of claim 1, wherein the set of attributes includes a level of security.

52. **(Previously Presented)** The method of claim 51, wherein the level of security includes a data volume security.

53. **(Previously Presented)** The method of claim 52, wherein the data volume security includes whether the data volume is secure or open.

54. **(Previously Presented)** The method of claim 51, wherein the level of security includes a fabric security.

55.     **(Previously Presented)**     The method of claim 51, wherein the level of security includes a host bus adapter security.
56.     **(Previously Presented)**     The method of claim 1, wherein the set of attributes includes a data volume size.
57.     **(Previously Presented)**     The method of claim 1, wherein the set of attributes includes an end point storage type.
58.     **(Previously Presented)**     The method of claim 1, wherein the set of attributes includes a number of threads.
59.     **(Previously Presented)**     The method of claim 1, wherein the set of attributes includes a number of fabrics.
60.     **(Previously Presented)**     The method of claim 1, wherein the set of attributes includes a bandwidth attribute.
61.     **(Previously Presented)**     The method of claim 60, wherein the bandwidth attribute specifies whether each thread must be exclusive or shared.
62.     **(Previously Presented)**     The method of claim 1, wherein the set of attributes includes a cost characteristic.
63.     **(Previously Presented)**     The method of claim 62, wherein the set of attributes includes a cost characteristic that considers a percentage of a device used by a data path.
64.     **(Previously Presented)**     The method of claim 1, wherein the set of attributes includes a device uptime characteristic.

65. **(Previously Presented)** The method of claim 64, wherein the device uptime characteristic includes data describing when a devices is available and unavailable.

66. **(Previously Presented)** The method of claim 1, wherein the set of attributes includes a rate of data that an application is experiencing.

67. **(Previously Presented)** The method of claim 1, wherein the set of attributes includes a number of threads, a number of switch fabrics, and a level of security.

68. **(Previously Presented)** The method of claim 1, wherein the act of evaluating each said candidate data path against the set of attributes includes ranking at least two data volumes in the SAN.

69. **(Previously Presented)** The method of claim 68, wherein the act of evaluating each said candidate data path against the set of attributes includes ranking all of the data volumes in the SAN.

70. **(Canceled)**

71. **(Canceled)**

72. **(Currently Amended)** ~~The method of claim 1,~~ A method of creating a data path for a process executing on a server coupled to a storage area network (SAN), the SAN providing connectivity between the server and a storage device in the SAN, the method comprising:

parameterizing a set of attributes for a desired data path between the process and the storage device of the SAN, wherein the set of attributes includes:

- a detail about at least one data volume;
- a performance setting; and
- a policy setting; and

constructing the data path that provides said set of attributes, wherein said constructing step further comprises:

searching the SAN for a set of candidate storage devices;

identifying a candidate data path from the server to each candidate storage device of said set of candidate storage devices;

evaluating each said candidate data path against the set of attributes to rank said candidate data paths from a best candidate data path to a least best candidate data path according to the attributes, wherein the act of evaluating each said candidate data path against the set of attributes includes determining whether a port is used by another data path, and assigning a weighting based on whether the port is used by another data path;  
and

selecting said best candidate data path as the data path to be constructed by said constructing step.

73. **(Currently Amended)** A method of creating a data path for a process executing on a server coupled to a storage area network (SAN), the SAN providing connectivity between the server and a storage device in the SAN, the method comprising:

parameterizing a set of attributes for a desired data path between the process and the storage device of the SAN; and

constructing the data path that provides said set of attributes, wherein said constructing step further comprises:

identifying candidate data paths from the server to each candidate storage device of said set of candidate storage devices;

evaluating each said candidate data path against the set of attributes to rank said candidate data paths from a best candidate data path to a least best candidate data path according to the attributes, wherein a destination storage volume of each candidate data path is ranked, wherein a switch fabric of each candidate data path is ranked separately from the storage destination storage volume rank, wherein the rank of the candidate data path is based on both the rank of a corresponding destination storage volume and the rank of a corresponding switch fabric; and

selecting said best candidate data path as the data path to be constructed by said constructing step.

74. **(Canceled)**

75. **(Previously Presented)** The method according to claim 73, further comprising presenting said ranked candidate data paths to a user for selection; and wherein the best candidate data path a user-selected candidate data path as the data path to be constructed by said constructing step.

76. **(Canceled)**

77. **(New)** The method of claim 72 wherein said set of attributes includes a pre-defined template.

78. **(New)** The method of claim 77 wherein said pre-defined template specifies a set of performance, availability, and cost metrics for the desired data path.

80. **(New)** The method of claim 78, wherein said set of performance and availability metrics includes at least one of a number of threads, a security level, and a default volume size and characteristics, default path characteristics.

79. **(New)** The method of claim 72 wherein said set of attributes includes a data path owner, application, and the server on which the application is executing.

80. **(New)** The method of claim 72 wherein said parameterizing step includes a step of entering a user-defined attribute for inclusion in said set of attributes.

81. **(New)** The method of claim 80 wherein said entering step includes entry of said user-defined attribute by use of a graphical user interface coupled to the SAN.

82. **(New)** The method of claim 72 wherein said constructed data path includes all physical, logical and security component identification and configuration information sufficient to operably link the process to an identified data volume of the SAN.

83. **(New)** The method of claim 72, further comprising:  
connecting the SAN to a Wide Area Network (WAN) through a general purpose computer; and  
communicating with another processing system through the WAN using the general purpose computer.

84. **(New)** The method of claim 72, wherein the set of attributes includes a level of security.

85. **(New)** The method of claim 84, wherein the level of security includes a data volume security.



86. **(New)** The method of claim 85, wherein the data volume security includes whether the data volume is secure or open.
87. **(New)** The method of claim 84, wherein the level of security includes a fabric security.
88. **(New)** The method of claim 84, wherein the level of security includes a host bus adapter security.
89. **(New)** The method of claim 72, wherein the set of attributes includes a data volume size.
90. **(New)** The method of claim 72, wherein the set of attributes includes an end point storage type.
91. **(New)** The method of claim 72, wherein the set of attributes includes a number of threads.
92. **(New)** The method of claim 72, wherein the set of attributes includes a number of fabrics.
93. **(New)** The method of claim 72, wherein the set of attributes includes a bandwidth attribute.
94. **(New)** The method of claim 93, wherein the bandwidth attribute specifies whether each thread must be exclusive or shared.
95. **(New)** The method of claim 72, wherein the set of attributes includes a cost characteristic.
96. **(New)** The method of claim 72, wherein the set of attributes includes a cost characteristic that considers a percentage of a device used by a data path.

97. **(New)** The method of claim 72, wherein the set of attributes includes a device uptime characteristic.

98. **(New)** The method of claim 97, wherein the device uptime characteristic includes data describing when a devices is available and unavailable.

99. **(New)** The method of claim 72, wherein the set of attributes includes a rate of data that an application is experiencing.

100. **(New)** The method of claim 72, wherein the set of attributes includes a number of threads, a number of switch fabrics, and a level of security.

101. **(New)** The method of claim 72, wherein the act of evaluating each said candidate data path against the set of attributes includes ranking at least two data volumes in the SAN.

102. **(New)** The method of claim 72, wherein the act of evaluating each said candidate data path against the set of attributes includes ranking all of the data volumes in the SAN.